



DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Part 938

[SATS No. PA-161-FOR; Docket ID: OSM-2012-0009; S1D1S SS08011000 SX064A000 221S180110; S2D2S SS08011000 SX064A000 22XS501520]

Pennsylvania Regulatory Program

AGENCY: Office of Surface Mining Reclamation and Enforcement, Interior

ACTION: Final rule; approval of amendment.

SUMMARY: We, the Office of Surface Mining Reclamation and Enforcement (OSMRE), are approving an amendment to the approved Pennsylvania regulatory program (the Pennsylvania program) under the Surface Mining Control and Reclamation Act of 1977 (SMCRA or the Act). The amendment we are approving consists of revisions and additions to Pennsylvania's regulations related to beneficial use of coal ash at active surface coal mining sites.

DATES: The effective date is [INSERT 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

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SUPPLEMENTARY INFORMATION:

- I. Background on the Pennsylvania Program and Federal Regulation of Coal Combustion Residues
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I. Background on the Pennsylvania Program and Federal Regulation of Coal Combustion Residues

The Pennsylvania Program

Section 503(a) of the SMCRA permits a state to assume primacy for the regulation of surface coal mining and reclamation operations on non-Federal and non-Indian lands within its borders by demonstrating that its program includes, among other things, State laws and regulations that govern surface coal mining and reclamation operations in accordance with the Act and consistent with the Federal regulations. 30 U.S.C. 1253(a)(1) and (7). On the basis of these criteria, the Secretary of the Interior conditionally approved the Pennsylvania program effective July 30, 1982. You can find background information on the Pennsylvania program, including the Secretary's findings, the disposition of comments, and the conditions of approval of the Pennsylvania program in the July 30, 1982, *Federal Register* (47 FR 33050). You can also find later actions concerning the Pennsylvania program and program amendments at 30 CFR 938.11, 938.12, 938.13, 938.15, and 938.16.

Federal Regulation of Coal Combustion Residue

SMCRA does not directly address the placement of Coal Combustion Byproducts (CCBs), also known as Coal Combustion Residues (CCRs), in active or abandoned coal mines and only two of OSMRE's implementing regulations reference CCBs: 30 CFR 816.41(i)(2)(iii) and 30 CFR 817.41 (h)(2)(iii) and (v). 72 FR 12026, 12029 (March 14, 2007). Nonetheless, as stated in our 2007 advanced notice of proposed rulemaking, "any material placed in mine pits or otherwise used to reclaim a permitted mine site must comply with SMCRA permitting requirements and performance standards, regardless of whether the material originates within the permit area or whether it is imported from outside the permit area." *Id.*

The United States Environmental Protection Agency (US EPA) published a final rule regulating the disposal of CCRs in the April 17, 2015, *Federal Register* (80 FR 21301). The 2015 US EPA rule does not apply to CCRs placed in active or abandoned underground or surface coal mines. Since the 2015 US EPA rule, US EPA has amended its CCR regulations. Background on the US EPA's CCR regulations are found at: <https://www.epa.gov/coalash/coal-ash-rule>. In 2019, US EPA proposed revising its definition of beneficial use, then deferred the rulemaking until 2021, when US EPA reopened its public comment period until May 11, 2021, on the beneficial use definition and provisions for CCR or coal ash accumulations. If, as a result of changes in Federal law or regulations, the approved Pennsylvania regulatory program no longer meets the requirements of SMCRA or its implementing regulations, we may require a state program amendment under 30 CFR 732.17(e)(1).

II. Submission of the Amendment

By letter dated March 13, 2012 (Administrative Record No. PA 894.00), Pennsylvania sent us a request to approve regulations related to the beneficial use of coal ash at active coal mine sites. Key provisions of the amendment include operating requirements for beneficial use, including certification guidelines for chemical and physical properties of coal ash beneficially used and water quality monitoring requirements.

We announced receipt of the program amendment in the July 11, 2012, *Federal Register* (77 FR 40836) (Administrative Record No. PA 894.05), with a deadline for public comment of August 10, 2012. We received requests to extend the public comment period, and announced an extension in the September 25, 2012, *Federal Register* (77 FR 58975) (Administrative Record No. PA 894.11). In that announcement, we issued a new deadline of October 19, 2012, for public comments, and announced public hearings for October 17, 2012, in Pittsburgh, Pennsylvania and Pottsville, Pennsylvania.

After receiving written public comments and oral testimony at the public hearings, we reviewed the amendment to determine whether it was in accordance with SMCRA and consistent with the regulations implementing SMCRA found at Title 30 of the Code of Federal Regulations (the SMCRA regulations or implementing regulations). We identified concerns and notified Pennsylvania of our concerns by letter dated March 3, 2014 (Administrative Record No. PA 894.45). Pennsylvania responded in a letter dated May 30, 2014 (Administrative Record No. PA 894.46). We identified additional concerns and notified Pennsylvania of these by letter dated August 3, 2015 (Administrative Record No. PA 894.47). Pennsylvania responded in a letter dated November 25, 2015 (Administrative Record No. PA 894.48). In both of its response letters, Pennsylvania elaborated on details of its proposed regulations.

In the proposed rule published in the *Federal Register* on July 11, 2012, we described the proposed program amendment to include sections of the Pennsylvania Code that, after further consultation with Pennsylvania, we learned are not part of the program amendment. Specifically, in the March 3, 2014, issue letter, we requested clarification of which regulations are pertinent to administering the approved Pennsylvania program. In a May 30, 2014, letter to us (Administrative Record No. PA 894.46), Pennsylvania clarified that it is requesting approval of regulations found at 25 Pa. Code sections 287.1 (definition of “coal ash”), 290.1, 290.101, 290.103, 290.104, 290.107, Subchapter C - Coal Ash Certification (sections 290.201, 290.202 and 290.203), and Subchapter D - (sections 290.301, 290.302, 290.303, 290.304, 290.305, 290.306 and 290.307). Thus, 25 Pa. Code sections 290.2, 290.102, 290.105, and 290.106 are not part of the Pennsylvania amendment.

III. OSMRE’s Findings

We are approving the amendment request under SMCRA and the Federal regulations at 30 CFR 732.15 and 732.17. In this final rule, we are approving the changes

to Pennsylvania's regulatory program as noted below. The full text of the program amendment is available for review at <https://www.regulations.gov>.

287.1. Definitions

The definition of "coal ash" has been added to Pennsylvania's regulatory program. Coal ash is defined for the purposes of Chapters 287 and 290 to include: fly ash, bottom ash, or boiler slag that resulted from the combustion of coal and is or has been beneficially used, reused, or reclaimed for a commercial, industrial, or governmental purpose. The definition includes materials that are stored, processed, transported, or sold for beneficial use, reuse, or reclamation. The definition also states that for the purposes of Chapter 288 of the Pennsylvania Code, which regulates residual waste landfills, coal ash is defined as fly ash, bottom ash, or boiler slag that resulted from the combustion of coal and that has not been beneficially reused.

OSMRE Finding: Neither SMCRA nor its implementing regulations define coal ash. However, Pennsylvania's definition of coal ash as types of coal ash, such as fly ash, that are products of coal combustion, and its list of possible uses is reasonable. We have determined the addition of the definition of coal ash is not inconsistent with SMCRA and its implementing regulations. We have also determined that the last sentence of the definition, pertaining to Chapter 288 of the Pennsylvania Code that relates to residual waste landfills, does not pertain to surface coal mining. Therefore, we approve the first two sentences of the definition of "coal ash" at 25 Pa. Code 287.1. Because the last sentence of the definition does not pertain to surface coal mining, it is not included in the approval.

290.1 Definitions

The definition of "Temporary coal ash storage pile" has been added and is defined as a pile in which coal ash is stored for not more than two weeks. The definition of

“Water table” is the top of the saturated zone including regional groundwater table, perched water tables, seasonal water tables, and mine pools.

OSMRE Finding: Neither SMCRA nor its implementing regulations define “temporary coal ash storage pile.” Storage of not more than two weeks is a reasonable interpretation of the term “temporary.” Accordingly, we have determined that the definition of temporary coal ash storage pile is not inconsistent with SMCRA or its implementing regulations and we approve the definition of temporary coal ash storage pile at 25 Pa. Code 290.1.

We have determined that the definition of water table is no less effective than the Federal definition of “water table” at 30 CFR 701.5. The definition proposed for Chapter 290 of the Pennsylvania Code is “the top of the saturated zone,” and the Federal definition is the “upper surface of a zone of saturation where the ground water is not confined by an overlying impermeable zone.” These definitions are identical in effect because they both retain the same fundamental concept that the water is not confined by an overlying impermeable zone. Pennsylvania’s definition also provides examples of these types of water tables. Therefore, we approve the definition of water table at 25 Pa. Code 290.1.

290.101. General Requirements for Beneficial Use

Pennsylvania added this section, which provides that, if operators comply with Chapter 290, then no solid waste disposal permit is required for beneficial use of coal ash. To be considered a beneficial use, chemical analysis must indicate that the coal ash does not exceed any of the maximum acceptable leachate levels discussed in section 290.201(a) and meets the physical characteristics of section 290.201. This section also provides that the chemical characteristics from section 290.201(a) apply to other beneficial uses of coal ash, such as structural fill, that are not part of this amendment.

A water quality monitoring plan is required for any structural fill that is used at a coal mining activity site or abandoned surface coal mine site where more than 10,000 tons of coal ash per acre or more than 100,000 tons in total per site is used. Additionally, the Pennsylvania Department of Environmental Protection (PADEP), at its discretion, may implement a water quality monitoring plan involving lesser quantities of coal ash. Coal ash may not be placed within eight feet of the water table unless used for mine subsidence control, mine fire control, or mine sealing. Coal ash may not be used in a way that causes water pollution.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. The Federal regulations implementing SMCRA do not specifically address beneficial use of coal ash. However, Pennsylvania's proposed coal ash regulations are consistent with the performance standards described at 30 CFR 816.41 and 816.42 and the monitoring and planning regulations at 30 CFR 780.21. The Federal regulation at section 816.41(b) of Title 30 requires that groundwater quality must be protected by minimizing toxic infiltration and approximating pre-mining recharge capacity. The incorporation of maximum acceptable leachate levels from section 290.201(a) of the Pennsylvania Code and the restriction on placement within eight feet of the water table minimize toxic infiltration to the most feasible extent. Furthermore, the requirement for a water quality monitoring plan and the minimum standards for that plan, as described in section 290.301 of the Pennsylvania Code, are consistent with 30 CFR 780.21(i) and 816.41(c), because section 290.301, as well as the SMCRA regulations, require a monitoring frequency of every three months, sampling of pH, total iron, and total manganese. Also, Pennsylvania requires monitoring protocols that incorporate the US EPA's *Handbook for Analytical Quality Control in Water and Wastewater Laboratories*.

Finally, to the extent that section 290.101 requires other chemical analysis in sections of the Pennsylvania Code that were not submitted as a program amendment, namely sections 290.102, 290.105 and 290.106, these other beneficial uses of coal ash are outside of the scope of this amendment, and we will not issue a finding on them here. Therefore, we approve 25 Pa. Code 290.101 as it applies to coal mining activities.

290.103. Use as a Soil Substitute

Pennsylvania added section 290.103, which provides that coal ash may be used as a soil substitute if, 60 days prior to such use, a written proposal is submitted to the PADEP. According to the additional section, the proposal must contain:

- A description of the project, including a topographic and soils map of the projected area and an explanation of how the coal ash will be stored prior to use, how the soil will be prepared for application, how the coal ash will be spread and, when necessary, how the coal ash will be incorporated into the soil;
- Commencement and conclusion dates of the project;
- Proposed volume of coal ash to be used, the proposed application rate and a justification for the rate;
- A total chemical and leaching analysis and pH analysis no older than one year old;
- A chemical analysis of coal ash for eleven constituents listed in subsection (e);
- An analysis indicating the coal ash will be beneficial to the use of the soil. This must be prepared and signed by an expert in soil science; and
- Landowner consent to use of coal ash as a soil substitute or additive.

The PADEP will respond in writing to the person proposing the use of coal ash as a soil substitute or additive indicating if it is consistent with this section.

To be considered a beneficial use as a soil substitute or additive the following must be met:

- pH must range between 6.5 to 8.0 when mixed together as required by the project;
- Chemical analysis demonstrates calcium carbonate equivalency requirements;
- Surface runoff is controlled;
- Coal ash must be incorporated into the soil within 48 hours of application, unless the PADEP approves a deviation. The coal ash must be incorporated into the first layer of surface soil, or if such is not present, the coal ash and substitute material must equal one foot. Coal ash is to enhance soil properties or plant growth;
- Coal ash must be applied at a rate per acre that protects public health, public safety, and the environment; and
- Fugitive dust must be minimized.

Coal ash may not be applied to soil being used for agriculture when the soil pH is less than 5.5 or if resultant chemical or physical soil conditions would be detrimental to biota.

Coal ash as a soil substitute or additive may not be placed within:

- 100 feet of an intermittent or perennial stream;
- 300 feet of an exceptional value wetland or exceptional value or high-quality waters;
- 300 feet of a water supply unless the water supply owner consents to a variance;
- 100 feet of a sinkhole or area draining to a sinkhole; and
- 300 feet from an occupied dwelling unless a landowner consents to a variance.

Maximum cumulative loading rates may not be exceeded in relationship to the following eleven constituents: arsenic, boron, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc.

Records of chemical and physical analyses, quantity of coal ash used, location of placement, and sources of the coal ash must be maintained for a minimum of three years and must be made available upon request by the PADEP.

Any deviation from the approved physical or chemical standards must be reported to the PADEP within 72 hours.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts but are consistent with SMCRA and the Federal regulations found at 30 CFR 779.21(b), 816.22, 816.41, and 816.111. SMCRA and its implementing regulations do not specifically address the use of coal ash as a soil substitute in reclamation applications, but do include requirements for the use and distribution of soil substitutes in general, for protection of the hydrologic balance, and for revegetation during reclamation.

The provisions in this section, including those related to a chemical leachate analysis, mandatory pH range, calcium carbonate equivalency requirements, and a limit on use of coal ash to the amount necessary to enhance soil properties, are sufficient to ensure that the application of coal ash as a soil substitute are consistent with the Federal regulations at 30 CFR 816.22(b) that provide that overburden may supplement or substitute soil if the operator demonstrates that the resulting medium is at least as suitable for sustaining vegetation as the original soil. The provisions in this section therefore also ensure that the application of coal ash as a soil substitute can support the revegetation requirements found at 30 CFR 816.111.

Other provisions in this section ensure that the application of coal ash as a soil substitute are not inconsistent with the Federal regulation at 30 CFR 816.41, which requires the protection of the hydrologic balance. The Federal regulation at 30 CFR 816.41(b) requires that groundwater quality must be protected by minimizing toxic infiltration and approximating pre-mining recharge capacity. The incorporation of

maximum acceptable leachate levels from section 290.201(a) of the Pennsylvania Code and the restriction on placement within eight feet of the water table minimize toxic infiltration to the most feasible extent. Section 816.41(d) of Title 30 of the Federal regulations requires operators to prevent acid or toxic drainage, runoff of suspended solids and general water pollution. This proposed section of the Pennsylvania Code contains significant buffers around streams and wetlands within which use of coal ash is not permitted, and includes a requirement to control surface runoff. These, in combination with the monitoring requirements described at 25 Pa. Code 290.301, are consistent with the Federal regulation at 30 CFR 816.41.

In total, the provisions in this section are consistent with the requirements in the Federal regulations implementing SMCRA. Therefore, we approve 25 Pa. Code 290.103. *290.104. Beneficial Use at Coal Mining Activity Sites*

Pennsylvania added section 290.104, which provides that approval for the beneficial use of coal ash at coal mining activity sites must, at a minimum, be:

- In compliance with the Pennsylvania's Clean Streams Law, its Surface Mining Conservation and Reclamation Act, its Coal Refuse Disposal Control Act, the applicable provisions of Chapters 86 – 90 and other applicable environmental statutes, and regulations promulgated thereunder;
- Certified under section 290.201; and
- Approved by the PADEP based on a request that is filed for approval. Each person wishing to use certified coal ash for a beneficial use at a coal mining activity site as part of a reclamation plan must submit a request with an appropriate filing fee and include the following:
 - A description of the project, including an estimate in cubic yards of the amount of coal ash to be used and how it will be stored prior to placement;

- Documentation that the coal ash has been certified for its intended use, including the identity of the generator and the PADEP-assigned certification identifier;
- A consent from the landowner properly recorded in the county deeds office; and
- An appropriate water quality monitoring plan.

When beneficial coal ash is used at a coal mining activity site, a nonrefundable permit filing fee is to be paid annually in the amount of \$2,000 for each year it is used until the year following final placement and then \$1,000 for each year until final bond release is achieved. This fee will be used to administer compliance programs. This fee will be reviewed and adjusted as necessary. Public notice must be given if coal ash is used at a coal mining activity site. Overall improvement in water quality or prevention of degradation of water quality is a requirement for using coal ash for reclamation purposes at coal mining activity sites. Coal ash may be allowed for beneficial use only for reclamation purposes at the following locations: pit area, abandoned mine lands within the surface coal mining permit, coal refuse disposal and reprocessing sites, and areas where other beneficial uses included in the reclamation plan are being conducted.

To be placed at active coal mining sites, the following additional operational requirements must be met including:

- The volume of the coal ash placed at the site may not exceed the volume of the coal, coal refuse, culm, or silt removed, unless approved by the PADEP. A greater volume will be allowed when it is demonstrated that reclamation will be enhanced or water quality improved or for certain exceptions at coal refuse reprocessing sites;
- Placement occurs by mixing with spoil or spreading it in horizontal layers no greater than 2 feet thick unless otherwise approved by the PADEP;

- Spreading and compaction must occur within 24 hours of delivery unless stored in accordance with the requirements of 25 Pa. Code Chapter 290, Subchapter E;
- Requirements of the Modified or Standard Proctor Test must be met when coal ash placement is not accomplished by mixing with spoil;
- Maintenance of the sources and volume of coal ash used;
- An approved water quality monitoring plan; and
- Minimization of fugitive dust.

Additional requirements are necessary for sites using coal ash as a soil substitute, soil additive, or when used at a coal refuse disposal site. Quarterly water sampling must be completed and submitted to the PADEP for review, unless less frequent monitoring is approved by the PADEP. Annual reporting of coal ash placed on a coal mining activity site must be submitted to the PADEP. Any deviation from the approved physical or chemical standards must be reported to the PADEP within 72 hours.

OSMRE Finding: We have determined that the provisions in this section have no direct counterpart in SMCRA or Federal regulations implementing SMCRA, because they do not address the use of coal ash. This section establishes standards for use of coal ash on permitted mining sites, and, as stated in this section, beneficial use of coal ash at coal mining sites is also subject to applicable provisions of Chapters 86 - 90 of the Pennsylvania Code that includes compliance with Pennsylvania's equivalent to the performance standards of 30 CFR Part 816, such as the protection and storage of topsoil and subsoil, hydrologic balance protection, impoundments, postmining land use, contemporaneous reclamation, backfilling and grading, revegetation, and others.

This section includes provisions relating to permit fees, and those provisions are in accordance with section 507(a) of SMCRA, which prohibits permit fees from exceeding the actual or anticipated cost to review, administer, and enforce the permit. Pennsylvania explained in its letter dated May 30, 2014, that it based the permit fee on estimates of

program costs to monitor the beneficial use of coal ash, including labor costs and sample analysis costs and then only to cover a portion of those costs. Pennsylvania further clarified in its November 25, 2015, letter that the fees were based on a workload analysis of how much time it takes to inspect a coal mine site where coal ash is being used and the sampling costs. The fees were then based on half of the total cost to account for the portion covered by the Title V grant and then further reduced to “provide a more reasonable fee amount.”

This section also describes operating requirements for various applications of coal ash, including general placement location, use at coal surface mining activity sites, use as a soil additive or substitute, use at coal refuse disposal sites, additional sampling protocols, and reporting and notification requirements. These provisions have no direct SMCRA counterparts. However, the restrictions on placement of coal ash and the requirement that use of coal ash be designed to improve or prevent degradation of water quality are consistent with the Federal requirement at 30 CFR 816.41(d) to prevent acid or toxic drainage, runoff of suspended solids, and general water pollution.

The provisions concerning placement of coal ash at surface mining activity sites contain limits on the volume and thickness of coal ash and minimum requirements for compaction. These provisions are consistent with the Federal regulations at 30 CFR 816.102, which require backfilling and grading to minimize erosion and ensure that spoil and waste materials are compacted to ensure stability.

The provisions concerning use of coal ash as a soil additive or substitute are not inconsistent with SMCRA or its implementing regulations as explained in our *Finding* for 290.103.

The provisions concerning use of coal ash at coal refuse disposal sites have no direct SMCRA counterparts. However, since the provisions apply to sites already permitted under Chapters 86-90 of the Pa. Code, and because the coal ash must improve

compaction and stability, reduce water infiltration, and improve the coal refuse leachate, the provisions are consistent with the Federal regulations at 30 CFR 816.81 and 816.83, which require general coal mine waste to minimize water infiltration, minimize surface erosion, and minimize adverse effects of leachate.

The provisions concerning coal ash sampling require compliance with the certification provisions proposed at 290.201, which are being approved; see *our Finding* for section 290.201 for rationale. This subsection provides for approval of less frequent monitoring only if the coal ash will be used on or contiguous to the generation site. Under these conditions, the coal ash will be monitored quarterly at the generation facility and placed on a contiguous site without any changes to the constituents of the coal ash. Therefore, the quarterly monitoring at the facility may substitute for a portion of the sampling at the adjacent placement site, while still maintaining an overall sampling regimen that will protect groundwater and surface waters consistent with Federal regulations at 30 CFR 816.41.

The provisions concerning reporting and notification do not have direct SMCRA counterparts. However, the requirement to submit an annual report to the PADEP with volume and weight of coal ash, and the requirement to notify the PADEP if the coal ash does not meet its certification requirements, will allow the PADEP to monitor and react to changes in the quantity and quality of coal ash used under this chapter, and ensure compliance with the Federal regulations discussed herein.

This section is not inconsistent with the Federal regulations implementing SMCRA. Therefore, we approve 25 Pa. Code 290.104.

290.107 Requests for Information

Pennsylvania has added this section that provides that the PADEP has the right to request information documenting compliance with this subchapter and that failure to have

documentation of compliance may result in a presumption of that person disposing of residual waste without a permit.

OSMRE Finding: There is no direct Federal counterpart in either SMCRA or its implementing regulations. We have determined that Pennsylvania has the discretion to require additional information in order to ensure compliance with the Pennsylvania program. We have determined that this section is not inconsistent with SMCRA or its implementing regulations. Therefore, we approve 25 Pa. Code 290.107.

290.201 Coal Ash Certification

Pennsylvania has added this section, which provides that, in order to obtain coal ash certification, the following must be met:

- Maximum acceptable leachate levels must be met. Specifically, for metals and other cations (other than selenium) the criterion is 25 times the waste classification standard for a contaminant. For selenium and sulfate, the criterion is 10 times the waste classification standard. For non-metals and anions (other than sulfate and fluoride) the criterion is equal to the waste classification standard for a contaminant;
- pH must be greater than 7.0;
- When coal ash is used as an alkaline additive, the calcium carbonate equivalency must be a minimum of 100 parts per thousand. The Neutralization Potential Test is the standard unless another is approved by the PADEP; and
- When coal ash is used as a low permeability material the hydraulic conductivity must be 1.0×10^{-6} or less. This is evaluated using approved PADEP standards. The testing must use compaction and other preparation techniques to simulate conditions at the mine site.

To reach the parameters established above, lime or cement may be added to the coal ash contingent upon request to and approval by the PADEP.

Requests to the PADEP for certification by a generator must include:

- Name and location of the generator;
- Designation of the beneficial use or uses requested;
- A specific description of the generation process. This should include details on the combustion and pollution control processes, the impact of these processes on the coal ash, fuel sources used, and the expected percentages of coal ash that will be derived and ultimately delivered to the beneficial use site;
- Description of any material mixed with the coal ash;
- A detailed chemical analysis, from a documented environmental laboratory, on at least four samples, taken throughout a 2 to 6-month sampling period within a year that fully characterizes the composition of the coal ash. This analysis must include:
 - Total concentrations for heavy metal using methods found in US EPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (US EPA Publication No. SW-846) or comparable methods approved by the PADEP.
 - Leachable concentration for heavy metals using methods found in EPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (US EPA Publication No. SW-846) or comparable methods approved by the PADEP. Leachate concentrations must be determined using EPA Method 1312, the synthetic precipitation leaching procedure, unless another leaching procedure is required by the PADEP.
 - pH using the soil and waste pH method found in EPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (US EPA Publication No. SW-846) or comparable methods approved by the PADEP.

- Information that shows that the laboratory making a chemical analysis for the application is in compliance with 27 Pa.C.S. Chapter 41 (relating to environmental laboratory accreditation)
- A laboratory analysis for optimum moisture content and dry density;
- Analysis of hydraulic conductivity;
- Determination of neutralization potential;
- A detailed description of the sampling methodology used; and
- Other necessary testing if required for a specific beneficial use proposed.

PADEP will review requests and notify the generator in writing of the assigned certification identifier or rationale as to why the source was not certified. If the coal ash is certified, the generator must submit regular monitoring information demonstrating continued compliance. The monitoring information must include at least one representative sample, taken quarterly. Further, a representative sample is required whenever there is a change in operation that could result in a change to any chemical or physical component of the coal ash. Annually a report must be produced that includes the weight, in dry tons, of coal ash produced for beneficial use in the previous calendar year, an estimate of the volume and the locations of where the coal ash is delivered.

A coal ash generator must notify the PADEP of any changes to the information found in the application or evidence that the coal ash is not meeting certification requirements.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. We have determined that the request by a generator for certification of the coal ash is an integral component of the process to allow the beneficial use of coal ash for reclamation, as an alkaline additive, as a low permeability material, or as a soil additive or soil substitute. The Federal regulation at 30 CFR 780.18(b)(4) provides that a reclamation plan must demonstrate the suitability of topsoil substitutes or supplements under 30 CFR 816.22(b) and that the regulatory authority may require other

analyses to demonstrate the suitability of those substitutes and supplements. Section 816.22 of Title 30 of the Federal regulations requires that overburden used as a soil substitute or supplement allow the resulting soil mixture to achieve equivalent vegetative capacity as the original soil. This section of the amendment places strict limits on chemical constituents, mandates a specific pH range, and requires analysis of hydraulic conductivity, moisture content, and dry density. The combination of chemical and physical requirements is consistent with the requirements of Federal regulations at 30 CFR 780.18 (b)(4) and 816.22 (b) of a demonstration for topsoil substitutes and supplements.

Federal regulations at 30 CFR 816.41 require protection of groundwater and surface water by preventing acid formation and minimizing discharge of pollutants. This proposed section allows for the prevention of acid formation through the use of coal ash by requiring minimum levels of calcium carbonate equivalency in neutralization and by allowing the use of coal ash as a low permeability substance to minimize infiltration of water at coal refuse disposal sites. This section also minimizes discharge of pollutants by setting strict limits on the presence of various chemical components in the coal ash. This section therefore is consistent with the performance standards described at 30 CFR 816.41.

Therefore, we approve 25 Pa. Code 290.201.

290.202 Revocation of Certification

Pennsylvania has added this section, which provides that certification for a source of coal ash will be revoked if any of the following occur:

- Monitoring requirements are not met;
- Coal ash exceeds certification standards and exceedance certification requirements, as described in section 290.203; or

- Physical or chemical characteristics make the coal ash unsuitable for beneficial use.

If certification is revoked, the coal ash cannot be used at a coal mining activity site or an abandoned mine land site in the Commonwealth, unless recertification is approved by the PADEP as outlined in subsection (c).

Recertification is possible if the generator can demonstrate, via detailed chemical analysis on the three recent monthly representative samples, that the coal ash meets the certification requirements, and there are no physical or chemical characteristics that make the coal ash unsuitable for beneficial use.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. The Federal regulation at 30 CFR 780.2 provides that the regulatory authority, in this case the PADEP, should be provided comprehensive and reliable information and that activities are only allowed if they are in compliance with SMCRA, the regulations, and the regulatory program. The criteria for revoking coal ash certification are necessary to ensure that coal ash is suitable as a beneficial use and in compliance with Pennsylvania's coal ash regulations. We have determined that this regulation is not inconsistent with the Federal regulations implementing SMCRA. Therefore, we approve 25 Pa. Code 290.202.

290.203 Exceedance of Certification Requirements

Pennsylvania has added this section, which provides that, if the coal ash sample results exceed any certification standard, the generator must—within 30 days of receiving the results—submit to the PADEP the following, as applicable:

- In the event of a laboratory error, documentation and an explanation of the error from the laboratory, along with a corrected analysis demonstrating the coal ash certification standards are met; and

- Demonstration of an anomaly. This must be documented by a comparison of the anomalous sample with prior samples, additional samples demonstrating criteria are being met, a plan for temporary increases in monitoring, and an explanation of the cause of the exceedance and how further exceedances will be avoided.

By providing this information, if the generator demonstrates to the PADEP's satisfaction that the exceedance is an anomaly, use of the coal ash as a beneficial use may resume. Failure to provide this information will result in a revocation of beneficial use certification for the source.

OSMRE Finding: We have determined that the provisions in this section have no direct SMCRA counterparts. As stated in the above *Finding*, the Federal regulation at 30 CFR 780.2 provides that the regulatory authority should be provided with comprehensive and reliable information and that activities are allowed only if they are in compliance with SMCRA, the regulations, and the regulatory program. The establishment of procedures for the enforcement of the exceedance of certification requirements will ensure that no adverse effects will result from those sources of coal ash that exceed any certification standard. This section is not inconsistent with the Federal regulations implementing SMCRA. Therefore, we approve 25 Pa. Code 290.203.

290.301 Water Quality Monitoring

Pennsylvania has added this section, which requires the submittal to the PADEP of a water quality monitoring plan before placement or storage of coal ash. At a minimum, the plan must include:

- The location and design of down gradient and up-gradient monitoring points;
- A minimum of 12 background samples from each monitoring point taken at monthly intervals prior to placement of coal ash; and

- After each monitoring point is approved, samples are to be taken quarterly unless Pennsylvania requires more frequent sampling.

The person taking the samples and the laboratory performing the analysis must employ the quality assurance/quality control procedures outlined in the US EPA's *Handbook for Analytical Quality Control in Water and Wastewater Laboratories or Test Methods for Evaluating Solid Waste*. The analytical methodologies used to meet the requirements of this section must follow established US EPA protocol. The laboratory performing water quality analysis must be in conformity with PADEP mandated environmental laboratory accreditation.

Samples are to be analyzed for pH, temperature, specific conductance, alkalinity, acidity, sulfate, chloride, fluoride, nitrate, nitrite, ammonia, and total suspended solids without filtration.

Samples must be analyzed for heavy metals, total and dissolved concentrations. Also, static water elevation for monitoring wells and for springs, seeps, and mine discharges must be measured. Additional parameters may be required at the PADEP's discretion.

Quarterly water quality monitoring will continue and be submitted to the PADEP for a minimum of five years after final placement or storage of coal ash and annually thereafter from the end of year five through 10 years after final placement or storage, unless a longer period is required by the PADEP.

A demonstration of attainment of applicable groundwater or surface water remediation standards must be made and must be in conformity with an assessment plan under section 290.304 and an abatement plan under section 290.305.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. These provisions do establish a framework for monitoring and responding to water quality readings at sites with beneficial use of coal ash. The section provides that the water quality analysis must follow the methodologies in the

most recent US EPA guidelines along with the Standard Methods for Examination of Water and Wastewater, which is also a requirement of the Federal regulation at 30 CFR 780.21(a). The Federal regulation at 30 CFR 780.21(j)(2) requires that the surface water monitoring plan include the quantity and quality parameters, sampling frequency, and site locations. The section includes all of these requirements. Additionally, the section requires water quality monitoring of the same parameters as required by 30 CFR 780.21, as well as additional parameters not required by that section.

Paragraph (h) of section 290.301 of the Pennsylvania Code requires groundwater monitoring for a period of 10 years after final placement of coal ash. The Federal regulations at 30 CFR 816.41 require that both surface water and groundwater monitoring must occur until bond release. Final bond release occurs once the five-year period of responsibility for revegetation, described at 30 CFR 816.116, has elapsed and all the reclamation requirements are met. The amendment does not include a reference to revegetation in its water monitoring requirements. However, Pennsylvania has stated in its May 30, 2014, letter to us (Administrative Record Number PA 849.46) that its revised Technical Guidance Document will clarify that “Stage 3 reclamation bonds will be held for 10 years following the completion of vegetative planting on the site to correspond with the groundwater monitoring required in [section] 290.301(h). If pollution of groundwater is not observed at the end of this 10-year period, bonds may be released.”

Therefore, we approve 25 Pa. Code 290.301, to the extent that water monitoring will continue until final bond release as specified in 25 Pa. Code 86.151(a). If we determine in the future that Pennsylvania is implementing this provision differently, we may require Pennsylvania to submit a program amendment to revise its program.

290.302 Number, Location, and Depth of Monitoring Points

Pennsylvania added this regulation that provides the water quality monitoring system must accurately characterize groundwater and surface water flow and chemistry and flow systems on the site and adjacent areas. To achieve this, the following must be met:

- The monitoring system must have at least one point that is upgradient of the coal ash placement in order to provide representative data of groundwater not affected by the coal ash placement. The exception to this is in the event the placement is the up-gradient point; in such instances down gradient monitoring points will be used;
- The monitoring system must have at least three groundwater monitoring points down gradient of the coal ash placement, unless a request or need for only two is approved by the PADEP. Furthermore, at the PADEP's discretion, springs, seeps, and mine discharges may serve as substitutes if they are down gradient and will be as effective in monitoring the coal ash placement. Downgradient monitoring points must be hydrologically connected to the area of coal ash placement and constructed in a manner to detect chemical influence of the coal ash placement area throughout the longevity of the placement of coal ash. These points must be developed and protected as approved by the PADEP; and
- Surface water monitoring points are necessary where such monitoring may indicate any chemical influence on the hydrologic regime from coal ash placement.

Upgradient and downgradient points should be sufficient in number, location, and depth to be representative of water quality. These points must not interfere with routine operations at the site and in most cases should be within 200 feet of the coal ash placement area.

Upgradient points must be located so as not to be affected by effects on groundwater or surface water from the coal ash placement area. Downgradient monitoring points must be placed to provide early detection.

All wells drilled must be in compliance with the Water Well Drillers License Act and all well materials must be decontaminated prior to installation.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. We have determined that the standards for monitoring points described in this section will characterize water quality to allow for corrective actions if necessary. This section is not inconsistent with the provisions of 30 CFR 780.21 that require surface water and groundwater monitoring plans to identify the water quantity and quality parameters to be monitored and site locations of the monitoring points. Accordingly, we have determined that these provisions are consistent with the Federal requirements at 30 CFR 780.21. Therefore, we approve 25 Pa. Code 290.302.

290.303 Standards for Wells and Casing of Wells

Pennsylvania added a regulation that provides that for monitoring wells:

- Wells must be cased to maintain the integrity of the borehole and be constructed of material that will not react with the groundwater that is being monitored.
- The minimum casing diameter must be four inches.
- The well must be constructed with a screen that is factory-made, will not react with the groundwater, and the screen must maximize open area to minimize entrance velocities and allow rapid sample recovery.
- The well must be filter-packed with chemically inert clean quartz sand, silica or glass bead. The material chosen must be well-rounded and dimensionally stable.

- The casing must extend at least one foot above ground, unless the PADEP allows for flush mount wells.
- The annular space above the sampling depth must be sealed to prevent contamination and the casing must be designed and constructed to prevent cross contamination. The PADEP has discretion to approve alternative casing designs for wells in stable formations.
- The protective monitoring well casings must be enclosed in a protective casing that protects the well from damage, be installed for at least the upper 10 feet of the monitoring well and must stick up no more than three feet, and be grouted and placed with a concrete collar at least three feet deep.
- The casing must be numbered, strong enough to protect the well from damage by heavy equipment or vandalism, protrude above the monitoring well casing, have a locked cap and must be made of steel or other material of equivalent strength.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. However, these provisions are consistent with 30 CFR 816.13, which provides that any exposed underground opening must be managed and approved by the regulatory authority to minimize disturbance to the hydrologic balance and must be safe. The monitoring well casing standards described in this section will protect groundwater quality, allow for accurate and frequent water monitoring, and are protective. Accordingly, we have determined that these provisions are consistent with the Federal requirements at 30 CFR 816.13. Therefore, we approve 25 Pa. Code 290.303.

290.304 Assessment Plan

Pennsylvania has added a regulation providing that an assessment plan must be prepared within 60 days should any of the following occur:

- Degradation is indicated from water monitoring data. Statistical methods set forth in the US EPA's regulations at 40 CFR 258.53 will be used to assess the data; or
- Laboratory analysis of public or private water supplies indicate contamination of ground or surface water that could reasonably be attributable to coal ash placement.

Assessment must consist of chemical data and a supporting narrative should one of the following apply:

- Within ten working days following receipt of the degraded sample, re-sampling indicates degradation has not occurred. Determination that degradation is not present must be approved by the PADEP; or
- Within twenty working days following receipt of the degraded sample, demonstration is made that the degradation is caused by seasonal variations or activities unrelated to coal ash placement.

The assessment plan must specifically address the existence of the quality, quantity, area, extent, and depth of degradation and the rate and direction of migration of contaminants. It must be prepared by and under seal of a licensed professional geologist.

For assessment plans involving wells, lysimeters, borings, pits, piezometers, springs, seeps, mine discharges, and other assessment structures or devices, the number, location, size, casing type, and depth must be included. If the assessment points are wells, they must be constructed in accordance with this subchapter.

All assessment plans must include:

- Sampling and analytical methods for parameters to be evaluated;
- Evaluation procedures, including the previously gathered groundwater or surface water quality and quantity information, which is to be included to determine the concentration, rate, and extent of groundwater or surface water degradation from the facility;

- A biological assessment of surface water, if required;
- An implementation schedule; and
- Identification of the abatement standard that will be met.

The assessment plan must be implemented upon approval by the PADEP within a reasonable time not to exceed six months. Should the PADEP determine the proposed plan is inadequate, it may modify the plan and approve it as modified.

If the groundwater or surface water assessment indicates that contamination is leaving the coal ash placement site, the person subject to the requirements of Title 25 of the Pa Code, Chapter 290 must notify, in writing, each water supply owner within one-half mile down gradient of the coal ash placement area that an assessment has been initiated.

Within 45 days after the completion of the assessment plan, the person subject to the requirements of Title 25 of the Pa Code, Chapter 290 must submit a report containing the new data collected, analysis of the data, and recommendations on the necessity for abatement.

If the PADEP determines after review of the assessment report that implementation of an abatement plan is not required—pursuant to this subchapter—a revised water quality monitoring plan must be submitted for approval to the PADEP. This revised water quality plan must outline any necessary changes and include an application for permit modification if applicable. The modifications to the plan must be implemented within 30 days of approval.

Nothing in this section prevents the concurrent abatement or water supply replacement with or prior to implementation of the assessment.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. The Federal regulations at 30 CFR 816.41 requires groundwater and surface water monitoring, and that the operator must promptly notify the regulatory authority when sampling indicates non-compliance and take actions

provided in 30 CFR 773.17(e), which requires the permittee minimize any adverse impacts, and 30 CFR 780.21(h), which requires the permittee to take remedial measures. In response to our inquiry about how assessment plans and abatement plans will be incorporated into the coal mining permits and how they will be monitored for compliance, Pennsylvania, in its May 30, 2014, response stated that “[p]ermit amendments, permit special conditions or consent orders would be incorporated into the permit should an assessment/abatement plan be required.” We also stated that operators should immediately notify the PADEP of contamination leaving the coal ash placement site. Pennsylvania, in its May 30, 2014, response stated that the requirements of Chapter 290 of the Pennsylvania Code are in addition to the requirements of the Clean Streams Law and its implementing regulations, the Surface Mining Conservation and Reclamation Act, the Coal Refuse Disposal Control Act, and the regulatory provisions of Chapters 86 through 90 of the Title 25 of the Pa. Code. In addition to those statutes and regulations, Pennsylvania clearly states at 290.304(g) that this provision does not prevent the PADEP from requiring abatement or water supply replacement prior to or concurrently with the assessment. Accordingly, we have determined that these provisions are consistent with 30 CFR 816.41. Therefore, we approve 25 Pa. Code 290.304.

290.305 Abatement Plan

Pennsylvania added this regulation requiring the submission of an abatement plan to the PADEP when any of the following occur:

- The aforementioned assessment plan demonstrates the presence of groundwater or surface water degradation and analysis indicates an abatement standard will not be met at the compliance points;
- Departmental monitoring indicates the exceedance of an abatement standard even in a situation where an assessment plan has not been completed.

The following are exceptions to this standard and an abatement plan will not be required to be implemented:

- Within ten days after receipt of the results re-sampling of the affected monitoring points indicates exceedance of an abatement standard has not occurred and the PADEP concurs.

After a biological assessment of surface water indicates a detrimental effect to biota, abatement plans must be prepared and sealed by a professional geologist licensed to practice in Pennsylvania. The plan must include specific abatement of groundwater or surface water degradation, techniques to prevent further degradation and a schedule for implementation.

If abatement procedures are required, compliance must be demonstrated with at least one of the following standards at the identified compliance points:

- In situations where Statewide health standards are applicable, compliance with the Statewide health standard is required for that constituent at and beyond 500 feet of the perimeter of coal ash placement area or at and beyond the property boundary, whichever is closer;
- For all constituents, compliance with the background standard for constituents at and beyond 500 feet of the perimeter of the coal ash placement area or at and beyond the property boundary, whichever is closer. Load-based standards at groundwater discharge points are acceptable under certain circumstances where approval was otherwise granted by the PADEP;
- For constituents for which no primary maximum contaminant levels exist, the risk-based standard applies at and beyond 500 feet of the perimeter of the placement area or the property boundary, whichever is closer, if the following conditions are met:

- The risk assessment used to establish the standard assumes human receptors are present at the property boundary;
- The level is derived in a manner consistent with the PADEP's Land Recycling Program Technical Guidance Manual or other standard procedures used in health risk assessments;
- The level is based on scientifically valid studies conducted in accordance with good laboratory practice standards or other scientifically valid studies approved by the PADEP; and
- If the constituent is a carcinogen, the level represents a concentration associated with an excess lifetime cancer risk level of 1×10^{-6} to the negative fifth power at the property boundary.

When measuring compliance with secondary contaminants with Statewide health standards or those with no primary maximum contaminant level, the PADEP may approve a compliance point beyond 500 feet on land owned by the owner of the coal ash placement area.

The abatement plan must be completed and submitted to the PADEP for approval within 90 days, unless the deadline is modified in writing.

In the event the plan is deemed inadequate it may be modified and approved, or the submission of a sufficient modification may be required by the PADEP.

The abatement plan must be implemented within 60 days of approval.

Should the PADEP determine that the plan is incapable of achieving the groundwater or surface water protection contemplated in the approval, the PADEP may issue an order outlining one or more of the following: requiring a proposed modification to the abatement plan, requiring implementation of an abatement plan modified by the PADEP, or another order the PADEP deems effective for enforcement.

OSMRE Finding: We have determined that the provisions in this section do not have direct SMCRA counterparts. The Federal regulations at 30 CFR 773.17(e) require the permittee to minimize any adverse impacts and 30 CFR 780.21(h) requires the permittee to take remedial measures. The requirement to prepare and execute an abatement plan will mitigate adverse conditions that may arise. Accordingly, we have determined that these provisions are consistent with the Federal requirements at 30 CFR 773.17(e) and 780.21(h). Therefore, we approve 25 Pa. Code 290.305.

290.306 Recordkeeping

Pennsylvania added this regulation that provides that records, analyses, and evaluations of monitoring data and groundwater elevations must be maintained for a minimum of three years after water quality monitoring ceases. This documentation must be made available to the PADEP upon request.

OSMRE Finding: The Federal regulation at 30 CFR 840.14 requires that records provided to the State must be available to the public for at least five years after expiration of the period during which the operation is active or covered by a reclamation bond. In 25 Pa. Code 290.301, Pennsylvania provides that quarterly water quality monitoring will continue and be submitted to the PADEP for a minimum of five years after final placement or storage of coal ash and annually thereafter from the end of year five through 10 years after final placement or storage, unless a longer period is required by the PADEP. Also, Pennsylvania's regulations require retention of water monitoring data for a minimum of three years after monitoring ceases, coupled with the provision that quarterly monitoring will continue for five years after final placement or storage of coal ash and annually for ten years after placement. Pennsylvania, in its May 30, 2014, response to us, stated this it "holds the monitoring records from the operators indefinitely" and it holds "records for greater than 5 years." Accordingly, we have determined that the provisions

in this section do not have direct SMCRA counterparts but are consistent with 30 CFR 840.14. Therefore, we approve 25 Pa. Code 290.306.

290.307 Interim Water Quality Monitoring Requirements

Pennsylvania added this section, which is applicable to coal mine sites where coal ash has been stored or placed for beneficial use prior to December 11, 2010, and will continue after that date.

Sites not previously subject to water quality monitoring requirements must submit a water quality monitoring plan whereby the location and design of down-gradient and up-gradient monitoring points are identified, and samples are taken quarterly. This plan must be implemented within one year of the PADEP's approval of the plan.

Sites previously subject to water quality monitoring must ensure new monitoring points and replacement wells constructed after December 11, 2010, comply with the provisions of this subchapter including number, location, and depth of monitoring wells and ensure the wells are properly cased as set forth in this subchapter.

All water quality monitoring after March 11, 2011, must include analysis of pH, temperature, specific conductance, alkalinity, acidity, sulfates, chlorides, fluoride, nitrate, nitrite, ammonia, and total suspended solids as well as analysis of a variety of heavy metals, static water elevation for monitoring wells, and measured flow of springs, seeps, and mine discharges.

OSMRE Finding: These water quality provisions, which apply to coal ash disposal sites in existence prior to December 11, 2010, and continue to be used for beneficial use after December 11, 2010, cross-reference water quality provisions at section 290.301(b)(1) (b)(3), (e) through (g), as well as sections 290.302(b)-(f) and 290.303 of the Pennsylvania Code. As we stated above, we are approving in this rulemaking those provisions that apply to newly permitted sites. Through these provisions, Pennsylvania is ensuring that existing disposal sites are monitored in the same way as newly permitted

sites. As we noted above, these monitoring provisions are consistent with the hydrologic information requirements at 30 CFR 780.21. Therefore, we approve 25 Pa. Code 290.307.

IV. Summary and Disposition of Comments

We asked for public comments and requests for public hearings or meetings regarding the amendment. We received comments directly from five individuals and the following entities: the Anthracite Region Independent Power Producers Association (ARIPPA); CREDO Action (CREDO) (along with 3,424 individual comments); the Environmental Integrity Project (EIP), including Citizens Coal Council (CCC), Mountain Watershed Association, Earthjustice, and the Center for Coalfield Justice; the Electric Power Generation Association (EPGA); and the National Mining Association (NMA).

We also received oral testimony from several individuals at the two public hearings, some in their individual capacity and some in their representative capacity. At the public hearing in Pottsville, Pennsylvania, we received testimony from ten individuals. At the public hearing in Pittsburgh, Pennsylvania, we received testimony from twelve individuals.

NMA commented that certain citizens' groups wanted us to delay approval of any State program amendments proposing the placement of coal ash on surface coal mining operations until after we and the US EPA promulgated Federal regulations on the placement of coal ash. NMA opposed this position and stated that there is no good reason to delay approval of State program amendments, that SMCRA creates a system of "primacy" for States, and our task is to evaluate proposed State program amendments on whether or not the amendment meets the minimum requirements of SMCRA. The NMA stated it was not taking a position on the substance of the Pennsylvania amendment, but wanted the State's primacy respected, and its amendments appropriately considered.

OSMRE Response: We agree with the NMA that we should not delay our decision making on program amendments proposing the placement of coal ash on surface coal mining operations.

ARIPPA and EPGA commented that they support the Pennsylvania rules and that we should approve the program amendment.

OSMRE Response: We are approving the program amendment.

Individual 1 requested that we establish Federal standards for the disposal of coal ash and to follow the 2006 National Academy of Sciences recommendations. Additionally, the commenter expressed environmental concerns regarding a specific mine site in Pennsylvania and that Pennsylvania needs Federal oversight when it comes to regulating coal ash. The commenter stated that she was greatly relieved when we intervened at the mine site.

OSMRE Response: The commenter is correct that SMCRA provides for enforcement oversight by OSMRE of a State program. Section 503(a) of SMCRA (30 USC 1253(a)) permits a State to assume primacy for the regulation of surface coal mining and reclamation operations within the State upon approval by us of the State's program; however, this primacy is subject to OSMRE's oversight and enforcement authority, which is primarily set forth in section 521 of SMCRA (30 USC 1271). SMCRA does not require that there must be Federal regulations in place before a State program amendment can be submitted to us for review and decision making. Section 505(b) of SMCRA (30 USC 1255(b)) and 30 CFR 730.11(a) provide that "[a]ny provision of any State law or regulation . . . which provides for the control and regulation of surface mining and reclamation operations for which no provision is contained in this Act [SMCRA] shall not be construed to be inconsistent with this Act." As stated above in this rulemaking, except for two performance standard references, there is no direct SMCRA counterpart to Pennsylvania's regulations on the placement of coal ash on surface coal mining

operations. Furthermore, pursuant to 30 CFR 730.11(a), the Pennsylvania regulations are not inconsistent with nor do they preclude the implementation of SMCRA and its regulations.

Individual 2 commented regarding a specific fly ash impoundment located in Beaver County, Pennsylvania, that the impoundment's fly ash blows in the wind and that it has no liner. Also, she is concerned about the health of individuals.

OSMRE Response: We believe that the Pennsylvania regulations protect individuals living near surface coal mining operations using coal ash. The regulations include a chemical and physical certification program to ensure compliance with beneficial use requirements, standards for the location and type of coal ash that is permitted, and water quality monitoring to ensure that any unforeseen impacts on water quality are addressed promptly and thoroughly. Furthermore, the ash impoundment referenced in this comment is not located on a coal mining site and, therefore, is outside the scope of this amendment review.

CREDO provided 3,424 individual comments. All of the comments wanted strong Federal rules on the disposal and management of coal ash and did not want us to approve the Pennsylvania regulations because of concerns that the amendment would put drinking water supplies at risk. Some individuals had additional comments such as: a request to not allow abandoned coal mines to hold coal ash because these abandoned mines were not designed to hold coal ash; concerns related to hydrofracking activities; a request to delay our approval of the Pennsylvania amendments until after US EPA regulations go into effect; concerns with the fact that some coal ash contains heavy metals—including arsenic, mercury, and selenium—that cause serious health problems; a suggestion to contain coal ash in specially designed pits to keep it out of groundwater; a request to test each site to prevent leakage into water sources; a suggestion that coal ash should be encased in sealed abandoned mines that will hold the ash; a proposal that coal ash should

be contained and methods of detecting leakage employed at each site; general statements that Pennsylvania should move away from fossil fuels to reduce its carbon emissions; a request that coal ash be vitrified instead of placed at mining sites; and a statement that the proposed amendments interferes with the Pennsylvania constitution, which gives people the right to clean air and water.

OSMRE Response: The Pennsylvania regulations for abandoned coal mines were not submitted as a program amendment, so they are outside the scope of this amendment and require no further response. Hydrofracking activities are also outside the scope of this amendment and requires no further response. We disagree that we should wait until after the US EPA regulations are in place because SMCRA does not require that there must be Federal regulations in place before a State program amendment can be submitted to us for review and decision making. In fact, section 505(b) of SMCRA specifically provides for those situations where there are no SMCRA counterparts. On April 17, 2015, US EPA published a final rule regarding the disposal of CCR from electric utilities. (80 FR 21302CCR) In US EPA's preamble to the April 17, 2015, final rule, US EPA stated that its "rule does not apply to CCR placed in active or abandoned underground or surface coal mines." (80 FR 21341) Pennsylvania's program amendments require a chemical analysis for heavy metals such as arsenic, mercury, and selenium and has established maximum acceptable leachate levels for metals. We disagree that coal ash must be placed into specially designed pits to prevent groundwater infiltration. We have determined that incorporation into the soil or placement in the coal pit, in combination with the coal ash certification described in section 290.201 of the Pennsylvania Code, the restrictions on placement described in sections 290.103 and 290.104 of the Pennsylvania Code, and the water monitoring protocols described in sections 290.301 through 290.305 of the Pennsylvania Code are sufficient to prevent groundwater infiltration. We agree that sites should be tested to prevent contamination of water sources, and we have determined that

the water monitoring protocols described in sections 290.301 through 290.305 of the Pennsylvania Code are sufficient. Additionally, section 290.101(e) of the Pennsylvania Code prohibits, except in limited circumstances, the placement of coal ash within eight feet of a water table and prohibits the use of coal ash that will cause water pollution. Encasement of coal ash in abandoned mines is outside the scope of this amendment and requires no further response. The carbon emissions produced by coal combustion are outside the scope of this amendment and requires no further response. Vitrification of coal ash as a possible means for disposing of coal ash is outside the scope of this amendment and requires no further response. Finally, we disagree that the amendment would interfere with the Pennsylvania constitution's requirements for clean air and water. Pennsylvania has added requirements and restrictions described above that protect air and water quality.

Individual 3 commented on two specific sites that the proposed rule does not adequately protect residents from fugitive dust emissions emanating from coal ash. She also commented that we should establish SMCRA regulations for coal ash use instead of allowing Pennsylvania to establish a State rule.

OSMRE Response: We disagree that the proposed rule does not adequately address fugitive dust. The proposed rule specifically requires that operators must control fugitive dust to the highest possible extent, as described at sections 290.103(c)(8) and 290.104(f)(8) of the Pennsylvania Code. Further, the specific ash impoundments mentioned by the commenter are not located on coal mining sites and are therefore outside of the scope of this amendment. In addition, please see our above responses to comments about promulgating Federal rules implementing SMCRA before a State program amendment can be submitted to us for decision making.

EIP commented that Federal standards for coal combustion waste should be established before we approve a State program amendment; thus, they noted that we must

let US EPA rulemaking conclude before approving this amendment. EIP also opined that SMCRA requires that the Secretary not approve a State program until US EPA has disclosed its views on the State program. Other EIP comments include suggestions that: water monitoring should occur for 30 years beyond the closure of a coal mine site that accepts coal ash; water monitoring should occur when there are 10,000 tons of coal ash placed on a mine site instead of 100,000 tons as currently proposed by Pennsylvania; coal mine sites at the uppermost point of a water gradient should still use an up-gradient monitoring well during post-closure monitoring; property deeds should note that coal ash was used as structural fill; the public should be notified of all projects that propose the use of coal ash for structural fill or placed on abandoned mine sites; the State should require a specific standard for the control of fugitive dust such as the one US EPA proposed; there should be public notice and comment when coal ash is used as a soil amendment and should also require a monitoring plan; there should be stricter requirements for the “other beneficial uses” described in section 290.106 of the Pennsylvania Code; and there should be upfront bonding requirements that are sufficient to cover long-term monitoring and potential remediation projects.

OSMRE Response: Please see our above responses to the comments requesting that Federal regulations by both us and US EPA be finalized before we issue a decision on a State program amendment. As discussed below, we did solicit US EPA’s comments and concurrence that are discussed in this final rule. We disagree that water monitoring should occur for 30 years beyond closure of a coal mine site that uses coal ash. The monitoring requirements in the proposed rule do not replace the monitoring requirements provided for in Pennsylvania’s existing approved program and described in our regulations, and the coal ash will be certified as safe for use in advance, as described at 25 Pa. Code 290.201. Further, any indications of water quality degradation in the initial

ten-year monitoring period will necessitate abatement measures as required by section 290.305 of the Pennsylvania Code.

We disagree that water monitoring should be required for applications of more than 10,000 total tons of coal ash on the coal mining activity site. The certification program incorporated into Pennsylvania's proposed rule prohibits the usage of ash that includes certain amounts of contaminants. Using ash certified in this manner eliminates the need for monitoring under the proposed thresholds of 10,000 tons of coal ash per acre or 100,000 total tons at the site, as described at 25 Pa. Code 290.101(d). Additionally, Pennsylvania may require water quality monitoring for lesser quantities of coal ash if the site conditions warrant.

We disagree that sites occupying the uppermost portion of a water gradient should require at least one upgradient monitoring well. Such sites have no upgradient monitoring points available, and the amendment requires the use of a representative downgradient monitoring well that will detect any adverse effects, as described at 25 Pa. Code 290.301.

EIP's comments regarding deed notations for structural fills and that the public should be notified of all projects that propose use of coal ash for structural fill or placed on abandoned mine sites are outside the scope of this amendment. Because Pennsylvania has not submitted its regulations at sections 290.102 (structural fill) or 290.105 (abandoned mine sites) of the Pennsylvania Code to us for review, these comments address regulations that are outside the scope of our decision making, and they require no further response at this time.

We disagree that the proposed rules for fugitive dust are too vague, and that a specific standard should be added to the proposed rule. Pennsylvania's proposed regulations at sections 290.103(c)(8) and 290.104(f)(8) of the Pennsylvania Code require that offsite dispersion of dust from coal ash must be minimized. Pennsylvania, in its May 30, 2014, letter clarified that coal ash is "subject to the existing regulations relating to air

resources protection. Sections 87.137, 88.114, 88.205, 88.317, 89.64 and 90.149 provide for the required protections.” The Federal regulations at 30 CFR 816.95 require that exposed surface areas must be protected and stabilized to effectively control air pollution attendant to erosion. Thus, Pennsylvania’s proposed regulations are not inconsistent with the SMCRA regulation.

The proposed Pennsylvania regulation at section 290.104(d) of the Pennsylvania Code requires that a coal operator who uses coal ash on a coal mining site must provide public notice pursuant to sections 86.31 and 86.54 and that coal ash used as a soil substitute or soil additive will be part of the approved reclamation plan. Pennsylvania has proposed a water monitoring plan that is not inconsistent with the Federal regulations implementing SMCRA. There is no SMCRA regulation requiring monitoring of soil placement or soil additive.

EIP’s comment that there should be stricter requirements for “other beneficial uses” in section 290.106 is outside the scope of our review because Pennsylvania has not submitted its regulations at 290.106 (other beneficial uses) to us for approval. Thus, this comment requires no further response.

We disagree that additional financial assurance should be required for projects using coal ash. Pennsylvania clarified in its May 30, 2014, letter to us that the beneficial uses of coal ash at coal mining sites are subjected to bonding regulations described at 25 Pa. Code Chapter 86, Subchapter F, which are part of the approved Pennsylvania program. The only SMCRA regulations requiring financial assurance are the bonding requirements of 30 CFR Part 800. Because the amendment includes several measures, such as the coal ash certification described at 25 Pa. Code 290.201, the restrictions on placement near the water table and surface water throughout the amendment, and the water quality monitoring protocols described at sections 290.301 through 290.305, we have determined those measures protect water quality and allow revegetation, and the

existing Pennsylvania bonding regulations are sufficient to ensure funding for reclamation if bond forfeiture occurs.

Individual 4 commented that the proposed rule at section 290.303 of the Pennsylvania Code does not require background water quality sampling down-gradient of the coal mining site; that the monitoring does not include measurements of radioactivity; that comparing water quality data from residential wells and monitoring wells is inaccurate because the monitoring wells filter out the contaminants while the residential well does not filter the contaminants before the residents drink the water; that monitoring does not include secondary contaminants, including iron and manganese; that use of coal ash in reclamation produces off-gassing of carbon dioxide; and that the waiver for water quality monitoring for less than 100,000 tons of coal ash is too broad.

OSMRE Response: We disagree that the proposed rule does not require background water quality sampling down-gradient of the use site. Section 290.302 of the Pennsylvania Code explicitly requires three down-gradient groundwater monitoring points. Additionally, Section 290.301 of the Pennsylvania Code explicitly requires that each water quality monitoring plan will include a minimum of 12 background samples from each monitoring point, taken at monthly intervals before the placement of coal ash.

SMCRA and its implementing regulations do not require monitoring for radioactivity. State regulatory programs must be as effective as the SMCRA implementing regulations but do not have to exceed them. See also, 30 CFR 730.11.

We disagree that the proposed rule intends to compare residential wells with monitoring wells. The background water quality sampling required in section 290.301 of the Pennsylvania Code calls for a minimum of 12 background samples that conform to monitoring protocols written by the US EPA. Further, the use of filters in the monitoring wells does not reduce the accuracy of the readings, notwithstanding the lack of filters in many residential wells. The readings from the monitoring wells are intended to indicate

changes in chemical constituent concentrations over time, not to compare directly with residential water. Readings from monitoring wells are also compared to national and State water quality standards. Those water quality standards are meant to be compared to samples acquired through US EPA monitoring standards, including properly filtered monitoring wells.

SMCRA and its implementing regulations do not require monitoring for secondary contaminants. As noted previously, state regulatory programs must be as effective as the SMCRA implementing regulations but do not have to exceed them.

SMCRA and its implementing regulations do not address off-gassing, so we cannot require Pennsylvania to require regulation of off-gassing from reuse of coal ash.

We disagree that the proposed amendment must include water quality monitoring for projects using less than 100,000 total tons of coal ash, or 10,000 tons per acre. The certification program described at section 290.201 prohibits the usage of ash that contains certain amounts of contaminants. Using ash certified in this manner is not inconsistent with the SMCRA regulations and Pennsylvania requirements at sites using less than 100,000 total tons of coal ash, or less than 10,000 tons per acre, as described at section 290.101(d). Additionally, the Pennsylvania Code at section 290.101(d), provides that the PADEP may require water quality monitoring for lesser tonnage if warranted by site conditions.

Individual 5 commented that the PADEP in general does not adequately measure background levels of contamination before allowing waste deposition; that a Centers for Disease Control and Prevention (CDC) study of Polycythemia Vera cancer clusters in northeastern Pennsylvania indicated coal ash disposal as a correlated factor; and that the CDC study methodology underestimated the potential correlation by not appropriately calculating fugitive emissions and by not including a specific ash disposal site. Individual 5 cited section 2.3 of the Betty Kester Alliance for a Healthy Future's letter to the

Agency for Toxic Substances and Disease Registry for the fugitive emissions claim, and section 4.2 of that letter for the ash disposal site claim.

OSMRE Response: The Pennsylvania approved program contains monitoring protocols that are consistent with the Federal standards at 30 CFR 780.21.

The CDC study indicates that although coal ash disposal does occur in the study area, it is not indicated as a causal agent. See CDC's fact sheets entitled, *Exposure assessment of groundwater for the polycythemia vera cluster in northeast Pennsylvania*, page 2

https://www.atsdr.cdc.gov/sites/polycythemia_vera/docs/fact_sheet_exposure_assessment_of_groundwater_for_the_polycythemia_vera_cluster_in_northeast_pennsylvania.pdf), and *Environmental exposure assessment of air pollutants for the polycythemia vera cluster in northeastern Pennsylvania*, page 3

(https://www.atsdr.cdc.gov/sites/polycythemia_vera/docs/fact_sheet_environmental_exposure_assessment_of_air_pollutants_for_the_polycythemia_vera_cluster_in_northeast_pennsylvania.pdf).

Public Hearings

Pottsville

Individual 4 commented that the use of coal ash in mine reclamation cannot improve water quality; that coal ash is an industrial waste; that the proposed regulations do not include a requirement for background testing on residential wells; that the monitoring wells will not protect drinking water supplies because they use filter packs that residential wells lack; that the monitoring protocols and specifications are ineffective; that the proposed rule at section 290.303 of the Pennsylvania Code does not require background water quality sampling down-gradient of the coal mining site; that the monitoring does not include measurements of radioactivity; that monitoring does not

include secondary contaminants, including iron and manganese; and that use of coal combustion ash in reclamation produces off-gassing of carbon dioxide.

OSMRE Response: Regarding the comment that coal ash is an industrial waste, we disagree that coal ash meets the common understanding of the term “industrial waste” when used as structural fill or as an alkaline agent at surface mining sites. Industrial waste is commonly understood to include substances with no potential for reuse and that are landfilled or otherwise contained. The use of coal combustion byproducts described in the proposed regulations would preclude the byproduct from being considered waste.

The rest of the individual’s testimony was the same as his written comments. For our response to the rest of the testimony, please see our response above to the Individual 4 written comments.

Individual 6 commented that he was concerned about the impacts of the amendment on local well drinking water; that if the use is beneficial, no permit is required; there was inadequate public notice on a particular permit because the coal mine site borders two counties and the permit was only noticed in one paper; PADEP does not sufficiently deliberate before approving coal ash impoundments; and that Federal oversight of the State program is necessary.

OSMRE Response: We have determined that the amendment includes coal ash certification at 25 Pa. Code 290.201 and water quality monitoring at sections 290.301 through 290.305, and that these provisions protect water quality and are consistent with the Federal regulations at 30 CFR 780.21, 816.41, and 816.42. Please see our *Findings* for more explanation. Individual 6 is correct that a solid waste disposal permit is not required because it is not considered a solid waste if there is a beneficial use of coal ash. The particular permit referred to by the commenter has a Chapter 290 beneficial use permit. Regarding the public advertisement of that operation’s proposed permit, section 290.104(d) requires public notice pursuant to sections 86.31 or 86.54 of the Pennsylvania

Code. Those two sections, sections 86.31 and 86.54, are already part of Pennsylvania's approved program and not part of the program amendment that we are considering; thus, no further response is required. Coal ash impoundments are no longer authorized under Pennsylvania's coal mining program, as these are not approved beneficial uses. We agree that there is Federal oversight of State programs. We already inspect State regulatory programs and enforce SMCRA and its implementing regulations, when necessary.

Individual 7 read the commentary of a soil scientist, who wrote that section 290.201 of the Pennsylvania Code erroneously labels several contaminants, including arsenic, selenium, and manganese, as metals and cations, and as a result allows too high a concentration in the certified coal ash. Individual 7 also stated that Pennsylvania accepts industry science on coal ash without verification, and that Federal oversight on the State program is needed.

OSMRE Response: The certification standards at section 290.201 of the Pennsylvania Code do not classify arsenic and manganese as metals and provide a separate maximum leachate amount for selenium. Our regulations do not have a maximum acceptable leachate level. Also, Pennsylvania, in its May 30, 2014, letter to us, clarified that the basis of its list is Table 3.2 in Managing Coal Combustion Residues in Mines produced by the National Research Council (NRC) in 2006. Pennsylvania went on to say that it added parameters to the NRC list such as nitrate, nitrite, ammonia, the major cations and anions, and fluoride. Fluoride was added in response to a comment during Pennsylvania's own comment period. Please see our above response to the comment on Federal oversight of the Pennsylvania program.

A representative of the Electropower Generation Association commented that the use of coal ash reduces landfill dumping on undisturbed sites, that coal ash can mitigate acid mine drainage, and that because of the large volume of coal ash produced in the

State they worked with the State environmental regulators to come up with a beneficial program.

OSMRE Response: We acknowledge the group's support of the proposed amendment and no further response is required.

Individual 8 commented that a coal ash impoundment called the Hazleton Project presents a danger to several streams in the Susquehanna River watershed; that dust emissions from fly ash impoundments have caused air quality problems; that the placement of coal ash puts well drinking water at risk; and that coal ash needs to be regulated at the Federal level.

OSMRE Response: Please see our above responses to comments regarding coal ash impoundments; the safeguards in the amendment that protect water quality, air quality and drinking water supplies; and why the Pennsylvania program amendment can be approved without a SMCRA counterpart specifically relating to coal ash.

A representative of the CCC commented that some elements of the amendment were important improvements, such as the prohibition on placement of coal ash within eight feet of water tables; monitoring and testing for more trace metals and other parameters in the leachate; collection of a minimum of 12 months baseline of water monitoring data prior to the placement of coal ash; quarterly monitoring after coal ash placement; and ten years of monitoring after the cessation of ash placement. The CCC also commented that significant improvements are still needed, including requiring use of liners in landfills and surface impoundments for coal ash placement. The CCC also commented that Federal oversight of coal ash placement is needed, and that SMCRA framers did not envision coal mining sites as major ash disposal sites.

OSMRE Response: Landfills and surface impoundments are outside of the scope of this amendment, so no further response is required. Please see our above responses to

comments regarding Federal oversight of the Pennsylvania program and provisions that are not included within SMCRA or its implementing regulations.

Individual 9 commented that the high incidence of polycythemia vera in the eastern Pennsylvania region may be a result of unlined coal ash impoundments, fugitive dust emissions, and the many Superfund sites and illegal dumping practices prevalent in the area.

OSMRE Response: Please see our above responses to comments on the incidence of polycythemia vera in the eastern Pennsylvania region and on fugitive dust emissions. The comments regarding impoundments, Superfund sites, and illegal dumping are outside the scope of this amendment and require no additional response.

Individual 10 commented that Federal rules on coal ash placement are needed because individual States are too receptive to industry influence to ensure adequate environmental protection.

OSMRE Response: Please see our response above to comments concerning approval of Pennsylvania's proposed coal ash beneficial use amendment before the promulgation of SMCRA regulations for coal ash.

Pittsburgh

A representative of the Center for Coalfield Justice read testimony on behalf of Individual 10 that nationwide Federal regulations should be used to regulate use of coal ash so that the ash is not shipped to the State with the weakest regulations; that several components of the West Virginia coal ash use program are deficient; and that coal ash studies have shown poor potential for neutralization of acid mine drainage.

OSMRE Response: Please see our response to comments above regarding the absence of SMCRA regulations for coal ash. The West Virginia coal ash use program is outside the scope of this amendment and requires no additional response. We disagree that the amendment will not improve acid mine drainage. The coal ash certification

described at 25 Pa. Code 290.201 includes a Neutralization Potential Test, and the rules concerning use of coal ash as a soil substitute at section 290.103 require a minimum of 100 parts per thousand of calcium carbonate equivalency.

Individual 11 commented that the PADEP dismisses the health concerns of citizens regarding impoundments of coal ash, and that Federal regulations are needed to ensure proper protection of public health.

OSMRE Response: Please see our responses to comments above regarding coal ash impoundments and regarding the approval of the amendment in the absence of SMCRA regulations for coal ash.

Individual 12, the legal director at the Center for Coalfield Justice, commented that Federal regulations on use of coal ash are necessary for adequate environmental protection; that the monitoring threshold in section 290.101(d) of the amendment is too high; and that the amendment does not afford sufficient public participation from communities near proposed coal ash reuse sites.

OSMRE Response: Please see our responses to the comments above concerning the approval of the amendment in the absence of SMCRA coal ash regulations and the water quality monitoring thresholds in section 290.101 of the amendment. We disagree that public notice is not afforded in coal ash beneficial use projects. Section 290.104 of the amendment requires that public notice must be given for any coal ash utilization at a coal mining site. Furthermore, all documents related to coal ash use will be retained by the PADEP and available to interested parties upon request.

A representative of Earthjustice commented, on behalf of Individual 13, that fugitive dust from transportation of coal ash is causing serious health problems; that Federal regulations are required to ensure adequate protection of public health; and that the PADEP does not adequately enforce its existing regulations.

OSMRE Response: Please see our responses to comments above regarding fugitive dust and approval of the amendment in the absence of Federal regulations. The PADEP's enforcement of its regulations is outside the scope of this notice, which concerns the amendment and its adherence to SMCRA, and no further response is required, except to note that, under 30 CFR 733.12, we annually evaluate the administration of the State program to ensure compliance with SMCRA and its regulations.

Individual 14 commented that Federal regulations should be published before the proposed Pennsylvania amendment is approved; that the US EPA's proposed rules on coal ash disposal should be the source for developing other regulations; that we must seek US EPA comments and provide those comments to the public; that we should restrict material damage to the hydrologic balance outside of the permit area; that the amendment is too vague in its regulation of fugitive dust emissions, and that it should use a specific limit of 35 micrograms instead of requiring 'minimization' of fugitive dust emissions; and that the amendment does not require adequate groundwater monitoring, because sites without an upgradient monitoring point available should use a representative sampling site instead.

OSMRE Response: Please see our responses to comments above concerning approval of the amendment in the absence of Federal regulations and the US EPA's regulations on coal ash use. Moreover, we have received concurrence from the US EPA concerning this amendment; please see below the *Federal Agency Comments* subsection. The amendment at section 290.104 requires compliance with Pennsylvania's approved program. Pennsylvania's approved program restricts material damage to the hydrologic balance outside of the permit area (see 25 Pa. Code 87.101(a)). The water quality monitoring protocols of this amendment, at sections 290.301 through 290.305, require operators to monitor water quality downgradient from the placement site and abate any

increases in contaminants. The requirement to minimize emissions, in combination with the time limits on coal ash storage before application, as described in sections 290.103 and 290.104, are consistent with the SMCRA implementing regulations. The Federal regulation at 816.95(a) requires all exposed surface areas to be protected and stabilized to control air pollution. The Federal regulations implementing SMCRA do not have specific dust limitations, so there is no requirement under the SMCRA regulations for a 35-microgram limit, instead of the requirement to minimize fugitive dust emissions described in sections 290.103 and 290.104 of this amendment. We disagree that that the amendment does not require a representative sample of baseline groundwater quality for sites at the most upgradient location. Section 290.302(a)(1) requires that for sites occupying the most upgradient position, representative samples must be taken from downgradient locations sufficient to determine the extent of any adverse effects.

A representative of the Pennsylvania Coal Alliance (PCA) commented that PCA supports Pennsylvania's amendment, that it recycles a product that protects public health and the environment; and that the process of writing the regulations has been open and transparent.

OSMRE Response: We acknowledge this group's support of the proposed amendment and no further response is required.

Individual 15 commented that Federal rules and Federal oversight are needed because Pennsylvania cannot adequately regulate the storage and use of coal ash, using his experience as a former mayor of a town near an ash impoundment as evidence.

OSMRE Response: Please see our responses to comments above regarding approval of the amendment in the absence of Federal regulations and our oversight of the Pennsylvania program.

A representative of the Center for Coalfield Justice commented, on behalf of Individual 16, that fugitive dust from coal ash disposal sites has caused serious health

issues; that the PADEP does not enforce its existing regulations; and that Federal rules should be in place before the amendment is passed.

OSMRE Response: Please see our responses to comments above regarding fugitive dust emissions and coal ash impoundments, Pennsylvania's enforcement of its existing regulations, and approval of the amendment in the absence of Federal regulations.

A representative of the Mountain Watershed Association commented, on behalf of Individual 17, that fugitive dust from coal ash disposal sites has caused serious health issues; that the PADEP does not enforce its existing regulations, especially concerning the transport of coal ash on windy days; and that we should pass Federal rules on use of coal ash before allowing State rules to come into effect.

OSMRE Response: Please see our responses to comments above regarding fugitive dust emissions and coal ash impoundments, Pennsylvania's enforcement of its existing regulations, and approval of the amendment in the absence of Federal regulations.

A representative of the Mountain Watershed Association commented that the use of coal ash for treatment of acid mine drainage necessarily entails that no liners will be used, and that this creates an unacceptable environmental risk; and that Federal rules need to be in place before State programs are approved, that if there are not Federal standards then people in Pennsylvania will be affected by West Virginia because it will not have the same standards as Pennsylvania as States will ship coal ash to the location with the weakest regulations.

OSMRE Response: Please see our responses to the comments above regarding the use of liners in coal ash use and approval of the amendment in the absence of Federal regulations.

A representative of the Center for Coalfield Justice commented, on behalf of Individual 18, that coal ash impoundments have harmed water quality near LaBelle, Pennsylvania; that fugitive dust emissions from coal ash impoundments are causing public health problems; that coal ash impoundments are causing harm to local groundwater supplies; concerns about structural failures of impoundments like the Tennessee Valley Authority facility in Kingston, Tennessee; and that Federal rules are required because States cannot adequately protect the environment and public health.

OSMRE Response: Please see our responses to comments above regarding coal ash impoundments, fugitive dust emissions, and approval of the amendment in the absence of Federal regulations.

Individual 19 commented that Federal regulations on the use of coal ash are necessary in order for state regulatory programs to be effective; and that there is strong evidentiary basis to enact policy grounded in science for Federal rulemaking.

OSMRE Response: Please see our response to the comment above regarding approval of the amendment in the absence of SMCRA regulations for coal ash.

Federal Agency Comments:

U.S. Environmental Protection Agency (US EPA) Concurrence and Comments

Under 30 CFR 732.17(h)(11)(ii), we are required to get a written concurrence from the US EPA for those provisions of a program amendment that relate to air or water quality standards issued under the authority of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or the Clean Air Act (42 U.S.C. 7401 *et seq.*). This amendment relates to air and water quality standards, so on June 7, 2012, we requested comments and concurrence from the US EPA (Administrative Record No. PA 894.04). OSMRE received a letter from the US EPA dated October 18, 2012 (Administrative Record No. PA 894.23), that granted concurrence and submitted the following comments.

1. The implementation of the amendment must comply with the Clean Water Act (CWA), Safe Drinking Water Act (SDWA), Clean Air Act (CAA), and the Solid Waste Disposal Act;
2. The lifetime cancer risk indicated at 290.305(c)(3)(iv) is at 1×10^{-5} while Pennsylvania's water quality standards at 25 Pa. Code 93.8 are at 1×10^{-6} .
3. The use of the term "water supply" should be clarified in section 290.102(g)(2).
4. Pennsylvania should clarify what are public and private water supplies in section 290.304, while previous sections of Chapter 290 do not make a distinction and uses the term "water supply."
5. Pennsylvania should consider restricting use of coal ash within 300 feet of occupied dwellings for structural fills allowed under section 290.102.
6. The coal ash certification and monitoring should include any constituent that has been identified as an issue or potential issue such as bromide.
7. US EPA would like clarification on whether the 100-foot buffer around sinkholes described in section 290.102(g)(4) was related to runoff controls for conduits to groundwater.
8. The assessment and abatement plans described in sections 290.304 and 290.305 should use the criteria from Pennsylvania's water quality standards at 25 Pa. Code Chapter 93.
9. If placement of coal ash in abandoned coal mines may constitute injection subject to the Underground Injection Control Federal requirements at 40 CFR Part 144, then authorization from the US EPA would be required.

OSMRE Response: In our response, any reference to a Pennsylvania response refers to the May 30, 2014, letter from Pennsylvania to us.

With regard to other Federal environmental laws, Pennsylvania's response stated that "there is nothing in Chapter 290 that supersedes the requirements of the CWA, CAA, SDWA, SMCRA or the National Pollution Discharge Elimination System permitting program under the CWA. Implementation of Chapter 290 is in the context of the existing statutory and regulatory framework."

In that same response, Pennsylvania addressed the different cancer risk levels stating that "the risk level used in section 290.305 is based upon the [regulations for Administration of Land Recycling Program found at 25 Pa. Code 250]. The Medium Specific Concentrations (MSCs) relating to remediation of soil and groundwater under the Statewide health standard must be calculated with a lifetime cancer risk between 10^{-4} and 10^{-6} (pursuant to section [250.304 and 250.305]). The promulgated MSCs are calculated based on the median risk level of 10^{-5} . Under the [regulations for the Administration of] Land Recycling Act Program, any regulated discharge into surface water must comply with applicable laws and regulations relating to surface water discharges (pursuant to section [250.309]), so if there is a discharge to surface water the remediation must meet water quality standards."

US EPA's two comments regarding section 290.102 and the term "water supply" and restricting coal ash use near dwellings will not be addressed because section 290.102 is not part of the program amendment and thus outside the scope of our review.

Regarding US EPA's comment on clarifying the difference between public and private water supplies, the Federal regulations implementing SMCRA do not define public or private water supplies, so Pennsylvania's terminology regarding water supplies is not inconsistent with the SMCRA regulations. Pennsylvania responded to US EPA's comment that "water supply" is defined in Chapters 87 and 88, that public water supplies are those systems providing water for human consumption to at least 15 service connections or serves an average of at least 25 individuals daily for at least 60 days per

year. Pennsylvania also said that a private water supply is one that has less than 15 connections and is not regulated by either the PADEP or US EPA. Additionally, US EPA's comment that coal ash certification and monitoring should include any constituent that has been identified as an issue or potential issue such as bromide was addressed by Pennsylvania. Pennsylvania stated that "[i]f other parameters would be identified as "of concern," section 290.201(b)(10) provides for other physical and chemical testing if needed. The beneficial use of coal ash program operates under applicable mining regulations, which include language and flexibility for additional testing, such as at section 87.116 . . . and section 87.117. . . which state 'The Department may require the operator to . . . monitor additional parameters beyond the minimum specified in this section.' All mines must comply with section 86.37 including the provision that the applicant demonstrate 'that there is no presumptive evidence of potential pollution of the waters of the Commonwealth.'"

US EPA's comment on whether the 100-foot buffer around sinkholes described in section 290.102(g)(4) was related to runoff controls for conduits to groundwater. As noted above, section 290.102 is not part of the amendment and we are not addressing comments outside the scope of the amendment.

Regarding US EPA's comment that sections 290.304 and 290.305 should use the water quality criteria standards found at 25 Pa. Code Chapter 93, Pennsylvania responded that the "Chapter 93 criteria are applicable to some aspects of an assessment plan, they are not the only standard to be used for comparison. Many remining sites where coal ash is beneficially used for reclamation are in watersheds that are impaired, so the criteria in Chapter 93 are applicable to surface waters. The assessment plan is likely to include an evaluation of ground water. Typically, the assessment plan will rely on background water quality data in order to evaluate compliance."

Last, US EPA's comment on the placement of coal ash in abandoned mine lands that may be considered an injection will need to comply with US EPA injection regulations is outside the scope of this program amendment. The regulations for use at abandoned coal mine lands are not part of the program amendment and we are not responding to this comment.

Pennsylvania's response to the US EPA comments provides more information regarding its approved program. We have determined that Pennsylvania's proposed regulations are in accordance with SMCRA and not inconsistent with the Federal regulations implementing SMCRA. Based on our *Findings* and that the amendment received concurrence from the US EPA, we are approving the amendment.

V. OSMRE's Decision

Based on the above findings, we are approving Pennsylvania's amendment that was submitted March 13, 2012.

To implement this decision, we are amending the Federal regulations at 30 CFR part 938, which codify decisions concerning the Pennsylvania program. In accordance with the Administrative Procedure Act, this rule will take effect 30 days after the date of publication. Section 503(a) of SMCRA requires that the State's program demonstrate that the State has the capability of carrying out the provisions of the Act and meeting its purposes. SMCRA requires consistency of State and Federal standards.

VI. Statutory and Executive Order Reviews

Executive Order 12630—Governmental Actions and Interference with Constitutionally Protected Property Rights

This rule would not effect a taking of private property or otherwise have taking implications that would result in public property being taken for government use without just compensation under the law. Therefore, a takings implication assessment is not required. This determination is based on an analysis of the corresponding Federal regulations.

Executive Order 12866—Regulatory Planning and Review and 13563—Improving Regulation and Regulatory Review

Executive Order 12866 provides that the Office of Information and Regulatory Affairs in the Office of Management and Budget (OMB) will review all significant rules. Pursuant to OMB guidance, dated October 12, 1993, the approval of state program amendments is exempt from OMB review under Executive Order 12866. Executive Order 13563, which reaffirms and supplements Executive Order 12866, retains this exemption.

Executive Order 12988—Civil Justice Reform

The Department of the Interior (DOI) has reviewed this rule as required by Section 3 of Executive Order 12988. DOI has determined that this *Federal Register* notice meets the criteria of Section 3 of Executive Order 12988, which is intended to ensure that the agency review its legislation and proposed regulations to eliminate drafting errors and ambiguity; that the agency write its legislation and regulations to minimize litigation; and that the agency's legislation and regulations provide a clear legal standard for affected conduct rather than a general standard, and promote simplification and burden reduction. Because Section 3 focuses on the quality of Federal legislation and regulations, DOI limited its review under this Executive Order to the quality of this *Federal Register* notice and to changes to the Federal regulations. The review under this Executive Order did not extend to the language of the state regulatory program or to the program amendment that the Commonwealth of Pennsylvania drafted.

Executive Order 13132—Federalism

This rule has potential Federalism implications as defined under Section 1(a) of Executive Order 13132. Executive Order 13132 directs agencies to “grant the States the maximum administrative discretion possible” with respect to Federal statutes and regulations administered by the States. Pennsylvania, through its approved regulatory program, implements and administers SMCRA and its implementing regulations at the

state level. This rule approves an amendment to the Pennsylvania program submitted and drafted by the State, and thus is consistent with the direction to provide maximum administrative direction to States.

Executive Order 13175—Consultation and Coordination with Indian Tribal Governments

The Department of the Interior strives to strengthen its government-to-government relationship with Tribes through a commitment to consultation with Tribes and recognition of their right to self-governance and tribal sovereignty. We have evaluated this rule under DOI's consultation policy and under the criteria in Executive Order 13175 and have determined that it has no substantial direct effects on federally recognized Tribes or on the distribution of power and responsibilities between the Federal government and Tribes. Therefore, consultation under DOI's tribal consultation policy is not required. The basis for this determination is that our decision is on the Pennsylvania program that does not include Tribal lands or regulation of activities on Tribal lands. Tribal lands are regulated independently under the applicable, approved Federal program.

Executive Order 13211—Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

Executive Order 13211 requires agencies to prepare a Statement of Energy Effects for a rulemaking that is (1) considered significant under Executive Order 12866, and (2) likely to have a significant adverse effect on the supply, distribution, or use of energy. Because this rule is exempt from review under Executive Order 12866 and is not significant energy action under the definition in Executive Order 13211, a Statement of Energy Effects is not required.

Executive Order 13045—Protection of Children from Environmental Health Risks and Safety Risks

This rule is not subject to Executive Order 13045 because this is not an economically significant regulatory action as defined by Executive Order 12866, and this action does not address environmental health or safety risks disproportionately affecting children.

National Environmental Policy Act

Consistent with sections 501(a) and 702(d) of SMCRA (30 U.S.C. 1251(a) and 1292(d), respectively) and the DOI Departmental Manual, part 516, section 13.5(A), State program amendments are not major Federal actions within the meaning of section 102(2)(C) of the National Environmental Policy Act (42 U.S.C. 4332(2)(C)).

National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (15 U.S.C. 3701 *et seq.*) directs OSMRE to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. (OMB Circular A-119 at p. 14). This action is not subject to the requirements of section 12(d) of the NTTAA because application of those requirements would be inconsistent with SMCRA.

Paperwork Reduction Act

This rule does not include requests and requirements of an individual, partnership, or corporation to obtain information and report it to a Federal agency. As this rule does not contain information collection requirements, a submission to the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*) is not required.

Regulatory Flexibility Act

This rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). The State submittal, which is the subject of this rule, is based upon Federal regulations that set performance standards for hydrologic-balance protection during surface coal mining and reclamation operations, for which an economic analysis was prepared and certification made that such regulations would not have a significant economic effect upon a substantial number of small entities. In making the determination as to whether this rule

would have a significant economic impact, DOI relied upon the data and assumptions for the related Federal regulations.

Small Business Regulatory Enforcement Fairness Act

This rule is not a major rule under 5 U.S.C. 804(2), the Small Business Regulatory Enforcement Fairness Act. This rule: (a) Does not have an annual effect on the economy of \$100 million; (b) will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; and (c) does not have significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises. This determination is based on an analysis of the corresponding Federal regulations, which were determined not to constitute a major rule.

Unfunded Mandates

This rule will not impose an unfunded mandate on State, local, or Tribal governments, or the private sector of more than \$100 million per year. The rule does not have a significant or unique effect on State, local, or Tribal governments or the private sector. This determination is based upon an analysis of Federal regulations that set performance standards for hydrologic-balance protection during surface coal mining and reclamation operations, which were determined not to impose an unfunded mandate. Therefore, a statement containing the information required by the Unfunded Mandates Reform Act (2 U.S.C. 1531 *et seq.*) is not required.

List of Subjects in 30 CFR Part 938

Intergovernmental relations, Surface mining, Underground mining.

For the reasons set out in the preamble, 30 CFR part 938 is amended as set forth below:

PART 938 – PENNSYLVANIA

1. The authority citation for Part 938 continues to read as follows:

Authority: 30 U.S.C. 1201 *et seq.*

2. In § 938.15 amend the table by adding an entry for “March 13, 2012” in chronological order by “Date of final publication” to read as follows:

938.15 Approval of Pennsylvania regulatory program amendments.

* * * * *

Original Amendment Submission Date	Date of Final Publication	Citation/description

March 13, 2012	<u>[INSERT DATE OF FINAL PUBLICATION IN THE FEDERAL REGISTER]</u>	25 Pa. Code 287.1 (Residual Waste Management-General Provisions), 290.1, 290.101, 290.103, 290.104, 290.107, 290.201, 290.202, 290.203, 290.301, 290.302, 290.303, 290.304, 290.305, 290.306, 290.307 (Beneficial Use of Coal Ash)